

## SEQUENCE LISTING

&lt;110&gt; TRANSGENE SA

&lt;120&gt; Polypeptide having an improved Cytosine deaminase activity

&lt;130&gt; D21447

&lt;140&gt;

&lt;141&gt;

&lt;150&gt; US 60/508 274

&lt;151&gt; 2003-10-06

&lt;150&gt; EP 03/360 087

&lt;151&gt; 2003-07-21

&lt;160&gt; 2

&lt;170&gt; PatentIn Ver. 2.1

&lt;210&gt; 1

&lt;211&gt; 373

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence :Fusion protein having a CDase activity

&lt;300&gt;

&lt;400&gt; 1

Met	Val	Thr	Gly	Gly	Met	Ala	Ser	Lys	Trp	Asp	Gln	Lys	Gly	Met	Asp
1				5					10					15	

Ile	Ala	Tyr	Glu	Glu	Ala	Ala	Leu	Gly	Tyr	Lys	Glu	Gly	Gly	Val	Pro
			20					25					30		

Ile	Gly	Gly	Cys	Leu	Ile	Asn	Asn	Lys	Asp	Gly	Ser	Val	Leu	Gly	Arg
		35					40					45			

Gly	His	Asn	Met	Arg	Phe	Gln	Lys	Gly	Ser	Ala	Thr	Leu	His	Gly	Glu
	50					55					60				

Ile	Ser	Thr	Leu	Glu	Asn	Cys	Gly	Arg	Leu	Glu	Gly	Lys	Val	Tyr	Lys
65					70					75					80

Asp	Thr	Thr	Leu	Tyr	Thr	Thr	Leu	Ser	Pro	Cys	Asp	Met	Cys	Thr	Gly
			85						90					95	

Ala	Ile	Ile	Met	Tyr	Gly	Ile	Pro	Arg	Cys	Val	Val	Gly	Glu	Asn	Val
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100				105				110							
Asn	Phe	Lys	Ser	Lys	Gly	Glu	Lys	Tyr	Leu	Gln	Thr	Arg	Gly	His	Glu
		115					120					125			
Val	Val	Val	Val	Asp	Asp	Glu	Arg	Cys	Lys	Lys	Ile	Met	Lys	Gln	Phe
	130					135					140				
Ile	Asp	Glu	Arg	Pro	Gln	Asp	Trp	Phe	Glu	Asp	Ile	Gly	Glu	Ala	Ser
145					150					155					160
Glu	Pro	Phe	Lys	Asn	Val	Tyr	Leu	Leu	Pro	Gln	Thr	Asn	Gln	Leu	Leu
				165					170					175	
Gly	Leu	Tyr	Thr	Ile	Ile	Ser	Asn	Lys	Asn	Thr	Thr	Arg	Pro	Asp	Phe
			180					185					190		
Ile	Phe	Tyr	Ser	Asp	Arg	Ile	Ile	Arg	Leu	Leu	Val	Glu	Glu	Gly	Leu
		195					200					205			
Asn	His	Leu	Pro	Val	Gln	Lys	Gln	Ile	Val	Glu	Thr	Asp	Thr	Asn	Glu
	210					215					220				
Asn	Phe	Glu	Gly	Val	Ser	Phe	Met	Gly	Lys	Ile	Cys	Gly	Val	Ser	Ile
225					230					235					240
Val	Arg	Ala	Gly	Glu	Ser	Met	Glu	Gln	Gly	Leu	Arg	Asp	Cys	Cys	Arg
				245					250					255	
Ser	Val	Arg	Ile	Gly	Lys	Ile	Leu	Ile	Gln	Arg	Asp	Glu	Glu	Thr	Ala
			260					265					270		
Leu	Pro	Lys	Leu	Phe	Tyr	Glu	Lys	Leu	Pro	Glu	Asp	Ile	Ser	Glu	Arg
		275					280					285			
Tyr	Val	Phe	Leu	Leu	Asp	Pro	Met	Leu	Ala	Thr	Gly	Gly	Ser	Ala	Ile
	290					295					300				
Met	Ala	Thr	Glu	Val	Leu	Ile	Lys	Arg	Gly	Val	Lys	Pro	Glu	Arg	Ile
305					310					315					320
Tyr	Phe	Leu	Asn	Leu	Ile	Cys	Ser	Lys	Glu	Gly	Ile	Glu	Lys	Tyr	His
				325					330					335	
Ala	Ala	Phe	Pro	Glu	Val	Arg	Ile	Val	Thr	Gly	Ala	Leu	Asp	Arg	Gly
			340					345					350		
Leu	Asp	Glu	Asn	Lys	Tyr	Leu	Val	Pro	Gly	Leu	Gly	Asp	Phe	Gly	Asp
		355					360					365			
Arg	Tyr	Tyr	Cys	Val											
370															

&lt;210&gt; 2

&lt;211&gt; 216

&lt;212&gt; PRT

<213> *Saccharomyces cerevisiae*

&lt;400&gt; 2

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Met Ser Ser Glu Pro Phe Lys Asn Val Tyr Leu Leu Pro Gln Thr Asn
 1           5          10          15
Gln Leu Leu Gly Leu Tyr Thr Ile Ile Ser Asn Lys Asn Thr Thr Arg
          20          25          30
Pro Asp Phe Ile Phe Tyr Ser Asp Arg Ile Ile Arg Leu Leu Val Glu
          35          40          45
Glu Gly Leu Asn His Leu Pro Val Gln Lys Gln Ile Val Glu Thr Asp
          50          55          60
Thr Asn Glu Asn Phe Glu Gly Val Ser Phe Met Gly Lys Ile Cys Gly
 65          70          75          80
Val Ser Ile Val Arg Ala Gly Glu Ser Met Glu Gln Gly Leu Arg Asp
          85          90          95
Cys Cys Arg Ser Val Arg Ile Gly Lys Ile Leu Ile Gln Arg Asp Glu
          100          105          110
Glu Thr Ala Leu Pro Lys Leu Phe Tyr Glu Lys Leu Pro Glu Asp Ile
          115          120          125
Ser Glu Arg Tyr Val Phe Leu Leu Asp Pro Met Leu Ala Thr Gly Gly
          130          135          140
Ser Ala Ile Met Ala Thr Glu Val Leu Ile Lys Arg Gly Val Lys Pro
          145          150          155          160
Glu Arg Ile Tyr Phe Leu Asn Leu Ile Cys Ser Lys Glu Gly Ile Glu
          165          170          175
Lys Tyr His Ala Ala Phe Pro Glu Val Arg Ile Val Thr Gly Ala Leu
          180          185          190
Asp Arg Gly Leu Asp Glu Asn Lys Tyr Leu Val Pro Gly Leu Gly Asp
          195          200          205
Phe Gly Asp Arg Tyr Tyr Cys Val
          210          215

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